

SEQUENCE LISTING

<110> Gorenstein, David G. King, David J. Ventura, Daniel A. Brasier, Allan R.

<120> Thio-Modified Aptamer Synthetic Methods and Compositions

<130> 122144-002000

<140> PCT/US99/

<141> 1999-10-26

<150> 60/105,600

<151> 1998-10-26

<160> 50

<170> PatentIn Ver. 2.1

<210> 1

<211> 66

<212> DNA <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: aptamer

cagtgctcta gaggatccgt gacnnnnnn nnnnnnnnn nnnnncgaag cttatcgatc 60 cgagcg

<210> 2

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: aptamer

<400> 2

geogtecaca tacgacacca ce

22

<210> 3

| <211> | 22 | |
|--------|---|-----|
| <212> | DNA | |
| <213> | Artificial Sequence | |
| | | |
| <220> | | |
| <223> | Description of Artificial Sequence: aptamer | |
| | | |
| <400> | 3 | |
| ggccga | cege acageacaac ce | 22 |
| | | |
| | | |
| <210> | 4 | |
| <211> | 22 | |
| <212> | DNA | |
| <213> | Artificial Sequence | |
| | | |
| <220> | | |
| | Description of Artificial Sequence: aptamer | |
| | | |
| <400> | 4 | |
| | gata caacccacac gc | 22 |
| 59-5-5 | 3444 344334444 33 | |
| | | |
| <210> | 5 | |
| <211> | | |
| <212> | | |
| | Artificial Sequence | |
| 12137 | Artificial bequence | |
| <220> | | |
| | Description of Artificial Sequence: aptamer | |
| 12207 | beserption of Artificial bequence, aptamer | |
| <400> | 5 | |
| | getg tacatgeaca eg | 22 |
| gggccc | gorg racargeaca eg | |
| | | |
| <210> | 6 | |
| <211> | | |
| <212> | | |
| | Artificial Sequence | |
| 12,107 | Arcificial poduence | |
| <220> | | |
| | Description of Artificial Sequence: aptamer | |
| -220/ | bootaperon of merracial bogdonice, apeamer | |
| <400> | 6 | |
| | ccgc acagcacaac cc | 22 |
| ggooga | cogo acagoacaa oc | ~ ~ |
| | | |

| <211> 22 | |
|---|----|
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 7 | |
| gggcccgctg tacatgcaca cg | 22 |
| | |
| <210> 8 | |
| <211> 22 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| NETTY ALCITICIAL Dequence | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 8 | |
| qqqcccqctq cacqtgcaca cg | 22 |
| | |
| | |
| <210> 9 | |
| <211> 22 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 9 | 22 |
| gggcccgctg tacacgcaca cg | 22 |
| | |
| <210> 10 | |
| <211> 22 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| • | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 10 | |
| cecgttgttg tcccactcca cg | 22 |
| | |
| .040: 44 | |
| <210> 11 | |

| • | |
|---|---------|
| <211> 22 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <223> Description of Artificial Sequence: | aptamer |
| | • |
| <400> 11 | |
| cccgttgttg tcccgctcca cg | 22 |
| | |
| <210> 12 | |
| <211> 10 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| , | |
| <220> | |
| <223> Description of Artificial Sequence: | aptamer |
| | |
| <400> 12 | |
| gttgcgcaac | 10 |
| | |
| <210> 13 | |
| <211> 10 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: | aptamer |
| <400> 13 | |
| gctgtacatg | 10 |
| | |
| | |
| <210> 14 | |
| <211> 10 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <223> Description of Artificial Sequence: | aptamer |
| - | - |
| <400> 14 | |
| gttgtcccac | 10 |
| | |

<210> 15

| <211> 10 | |
|---|----|
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 15 | |
| gttgttgtcc | 10 |
| 599 | |
| | |
| <210> 16 | |
| <211> 20 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| AZIS AICIICIAI BOQUONOO | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| 1257 Boodraperon or measurem bodanion appained | |
| <400> 16 | |
| tgcagattgc qcaatctgca | 20 |
| egougueego goudeoegou | |
| | |
| <210> 17 | |
| <211> 22 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 17 | |
| cgtgtgcatg tacagcgggc cc | 22 |
| | |
| | |
| <210> 18 | |
| <211> 42 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 18 | |
| ccaggagatt ccacccagga gattccaccc aggagattcc ac | 42 |
| | |
| | |
| <210> 19 | |

| <211> 14 | |
|---|----|
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 19 | |
| ccaggagatt ccac | 14 |
| | |
| | |
| <210> 20 | |
| <211> 10 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 20 | |
| ggggacttcc | 10 |
| | |
| | |
| <210> 21 | |
| <211> 62 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 21 | |
| atgetteeae gageettten nnnnnnnnn nnnnnnnnn netgegagge ggtagtetat | 60 |
| te | 62 |
| | |
| | |
| <210> 22 | |
| <211> 22 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 22 | |
| ggggcggggg gatatggaca cc | 22 |

| <210> 23 | |
|--|----|
| <211> 22 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <pre><223> Description of Artificial Sequence: aptamer</pre> | |
| telor beset ipexes. On the transfer beganner appeared | |
| <400> 23 | |
| qqqctqqtqt qqtaqactcc cc | 22 |
| gggorggraf ggragaoroo oo | |
| | |
| <210> 24 | |
| <211> 22 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| TELEFORME BOOMSON | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| C20 Popolipidon di Nessassa Boquenter apreme | |
| <400> 24 | |
| cccqcccaca cacaccgccc cc | 22 |
| cocycould calcabage to | |
| | |
| <210> 25 | |
| <211> 23 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| 220. 18.0022002 4.12 | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| | |
| <400> 25 | |
| gggccgggag agaacatagc gac | 23 |
| 555***555-5 -55- 5 | |
| | |
| <210> 26 | |
| <211> 22 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| Ideal part of the children bogathor apparent | |
| <400> 26 | |
| cccncnnnca cacacegeee ee | 22 |
| | |

| <210> 27 <211> 22 <212> DNA <213> Artificial Sequence | |
|--|----|
| <220> <223> Description of Artificial Sequence: aptamer | |
| <400> 27 ggtatactet eegeceetee ee | 22 |
| | |
| <210> 28 <211> 26 <212> DNA <213> Artificial Sequence | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| <400> 28 | |
| cccacatgta cacgeogece ecgece | 26 |
| <210> 29 <211> 22 <212> DNA | |
| <213> Artificial Sequence | |
| <220> <223> Description of Artificial Sequence: aptamer | |
| <400> 29 cccacatgna cacnocgccc cc | 22 |
| | |
| <210> 30 <211> 22 | |
| <211> 22 <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <223> Description of Artificial Sequence: aptamer | |
| <400> 30 | |
| gggcgtatat gtgtggcggg gg | 22 |

```
<210> 31
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: aptamer
<400> 31
                                                                   14
gtggaatete etgg
<210> 32
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified base
<222> (9)
<223> thymidine 3'-o-phosphorodithioate
<220>
<221> modified base
<222> (10)..)
<223> thymidine 3'-o-phosphorothioate
<220>
<223> Description of Artificial Sequence: aptamer
<400> 32
ccaggagatt ccac
                                                                   14
<210> 33
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified_base
<222> (2)..)
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified_base
<222> (12)..)
```

```
<220>
<223> Description of Artificial Sequence: aptamer
<400> 33
gtggaatctc ctgg
                                                                   14
<210> 34
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified base
<222> (7)..)
<220>
<221> modified base
<222> (9)..)
<223> thymidine 3'-o-phosphodithioate
<220>
<223> Description of Artificial Sequence: aptamer
<400> 34
gtggaatctc ctgg
                                                                    14
<210> 35
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified base
<222> (2)..)
<220>
<221> modified base
<222> (7)..)
<220>
<221> modified_base
<222> (9)..)
<220>
<221> modified base
<222> (12)..)
```

```
<220>
<223> Description of Artificial Sequence: aptamer
<400> 35
                                                                   14
gtggaatctc ctgg
<210> 36
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified base
<222> Complement((3))
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified_base
<222> Complement((13))
<223> thymidine 3'-o-phosphodithioate
<220>
<223> Description of Artificial Sequence: aptamer
<400> 36
                                                                   14
ccaggagatt ccac
<210> 37
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified base
<222> Complement((6)..))
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified base
<222> Complement((8)..))
<223> thymidine 3'-o-phosphodithioate
<220>
<223> Description of Artificial Sequence: aptamer
```

```
<400> 37
                                                                   14
ccaggagatt ccac
<210> 38
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified_base
<222> Complement((3))
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified base
<222> Complement((6))
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified base
<222> Complement((8))
 <223> thymidine 3'-o-phosphodithioate
 <220>
 <221> modified_base
 <222> Complement((13))
 <223> thymidine 3'-o-phosphodithioate
 <220>
 <223> Description of Artificial Sequence: aptamer
 <400> 38
                                                                     14
 ccaggagatt ccac
 <210> 39
 <211> 14
 <212> DNA
 <213> Artificial Sequence
 <220>
  <221> modified_base
  <222> (9)..)
  <223> thymidine 3'-o-phosphodithioate
  <220>
```

<221> modified_base

```
<222> (10)
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified_base
<222> Complement((3)..))
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified base
<222> Complement((13))
<223> thymidine 3'-o-phosphodithioate
<220>
<223> Description of Artificial Sequence: aptamer
<400> 39
ccaggagatt ccac
                                                                   14
<210> 40
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified base
<222> (9)
<223> thymidine 3' -0-phosphodithioate
<220>
<221> modified base
<222> (10)
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified_base
<222> Complement((6)..))
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified_base
<222> Complement((8)..))
<223> thymidine 3'-o-phosphodithioate
<220>
<223> Description of Artificial Sequence: aptamer
```

```
<400> 40
                                                                   14
ccaggagatt ccac
<210> 41
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified base
<222> (9)..)
<223> thymidine 3'-o-phosphodithioate
<220>
<221> modified base
<222> (10)..)
<223> thymidine 3'-o-phosphodithioate
<220>
 <221> modified base
 <222> Complement((3)..))
 <223> thymidine 3'-o-phosphodithioate
 <220>
 <221> modified_base
 <222> Complement((6)..))
 <223> thymidine 3'-o-phosphodithioate
 <220>
 <221> modified_base
 <222> Complement((8))
 <223> thymidine 3'-o-phosphodithioate
 <220>
 <221> modified_base
 <222> Complement((13))
 <223> thymidine 3'-o-phoshodithioate
 <220>
 <223> Description of Artificial Sequence: aptamer
 <400> 41
                                                                     14
  ccaggagatt ccac
  <210> 42
```

<211> 22

<212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: IgKB promoter oligo <400> 42 agttgagggg actttcccag gc 22 <210> 43 <211> 33 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: aptamer <400> 43 33 ccaggagatt ccacttttgt ggaatctcct gga <210> 44 <211> 14 <212> DNA <213> Artificial Sequence <220> <221> modified_base <222> (9)..) <223> thymidine phosphoromonothioate <220> <221> modified_base <222> (10)..) <223> thymidine phosphoromonothioate <220> <223> Description of Artificial Sequence: aptamer <400> 44 ccaggagatt ccac 14 <210> 45 <211> 14

<212> DNA

<213> Artificial Sequence <220> <221> modified base <222> (3)..) <223> adenine phosphorodithioate <220> <221> modified base <222> (13) <223> adenine phosphorodithioate <220> <223> Description of Artificial Sequence: aptamer <400> 45 ccaggagatt ccac 14 <210> 46 <211> 14 <212> DNA <213> Artificial Sequence <220> <221> modified base <222> (6) <223> adenine phosphorodithioate <220> <221> modified base <222> (8) <223> adenine phosphorodithioate <220> <223> Description of Artificial Sequence: aptamer <400> 46 14 ccaggagatt ccac <210> 47 <211> 14 <212> DNA <213> Artificial Sequence <220> <221> modified base

```
<222> (3)
<223> adenine phosphodithioate
<220>
<221> modified_base
<222> (6)..)
<223> adenine phosphodithioate
<220>
<221> modified_base
<222> (8)..)
<223> adenine phosphodithioate
<220>
<223> Description of Artificial Sequence: aptamer
<400> 47
                                                                   14
ccaggagatt ccac
<210> 48
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified_base
<222> (6)..)
<223> adenine phosphodithioate
<220>
<221> modified base
<222> (8)..)
<223> adenine phosphothithioate
<220>
<221> modified base
<222> (13)..)
<223> adenine phosphodithioate
<220>
<223> Description of Artificial Sequence: aptamer
<400> 48
ccaggagatt ccac
                                                                   14
```

<210> 49

```
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified base
<222> (3)..)
<223> adenine phosphodithioate
<220>
<221> modified_base
<222> (6)..)
<223> adenine phosphodithioate
<220>
<221> modified base
<222> (8)..)
<223> adenine phosphodithioate
<220>
<221> modified base
<222> (13)..)
<223> adenine phosphodithioate
<220>
<223> Description of Artificial Sequence: aptamer
<400> 49
ccaggagatt ccac
<210> 50
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<221> modified_base
<222> (3)..)
<223> adenine phosphodithioate
<220>
<221> modified_base
<222> (4)..)
<223> guanine phosphodithioate
<220>
<221> modified_base
```

<222> (9)..)
<223> thymidine phosphodithioate

<220>
<221> modified_base
<222> (10)..)
<223> thymidine phosphodithioate

<220>
<223> Description of Artificial Sequence: aptamer

<400> 50 ccaggagatt ccac